APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,105	06/21/2000	Bradley M. Abrams	MS154749.1/40062.75-US-01	7343

23552 7590 11/21/2002	**EXAMINER**
MERCHANT & GOULD PC	SNYDER, DAVID A
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MINNEAPOLIS, MN 55402-0903	

ART UNIT	PAPER NUMBER
2122	

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>21 June 2000</u> .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-24</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-24</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>21 June 2000</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some * c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations underlined in the following claims must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim 1: A front end compiler system for generating code to be used by an execution environment, said front end system comprising:

a metadata module that compiles information to produce metadata information; and

an [sic] code module that compiles information to produces [sic] executable instructions.

Claim 5: A system as defined in claim 4 wherein the runtime environment comprises:

a loader for loading the common language file into the runtime environment; and

a layout engine for examining the common language file and determining the layout for classes and objects used at runtime.

Claim 6: A system as defined in claim 5 wherein the runtime environment further comprises:

a stack walker that keeps track of a call stack during runtime; and

a garbage collector for managing memory allocation during runtime.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2.   The drawings are objected to under 37 CFR 1.83(a) because they fail to show an "exemplary system 100" (pg. 17, line 16) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Item 96 of Fig. 4, and Item 322 of Fig. 7. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4.   Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   Claims 12 and 16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 12 and 16, the computer file descriptions or expressions of such a file, representing as they do computer file layouts and structures, are non-functional descriptive material and are not statuary because they are neither physical "things" nor statutory processes, as they are not "acts" being performed. Such claimed computer files do not define any structural and functional interrelationships between the computer file and other claimed aspects of the invention that permit the computer program's functionality to be realized. Since a computer file is merely a set of symbols arranged into a particular configuration capable of being interpreted by a computer program, *the computer file itself is not a process without the computer-readable medium needed to realize the computer file and computer file interpreting program functionality.* In contrast, a claimed computer-readable medium encoded with a computer file defines structural and functional relationships between the computer file and the medium which permits the computer program functionality to be realized and is thus statuary. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760. **In re Sarkar**, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). *See* Examination Guidelines for Computer-Related Inventions – Final Version, pages 8 – 10. *See* M.P.E.P. § 2106(IV)(B)(1)(a).

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8.   Claims 2 – 6, 10 – 24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled

in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. One of ordinary skill in the art would have been unable to reproduce or replicate the process engendered in consuming or compiling a 'common language file' or 'common language library,' as produced by another front-end compiler as set forth in the specification or claims. The process or processes of consuming or re-compiling a 'common language file' or 'library' in conjunction with a native source code file can be pursued in two different and opposing directions:

a.   The common language file or library metadata and executable code is separated from the included/imported common language file or library and incorporated into the new second common language file which is produced from a second native source code file; or

b.   The common language file or library metadata is incorporated into the second-compiled common language file, as produced by the compilation of the second native source code file, by means of reference to the data members and function/methods of the first-compiled common language file or library but without incorporating the executable code of the first-compiled common language file or library into the second-compiled common language file. By this means, at runtime, the second-compiled common language file loads into memory the first-compiled common language file or library and references the data members and methods/functions of the first-compiled common language file external to the internal operation of the second-compiled common language file.

9.   As regards figure 2 in light of these two interpretations of the 'compiling' or 'consuming' of a first-compiled common language file at the time of the compilation of a second native source code file, the figure may be incomplete or incorrect. With the first interpretation of the first-compiled common language file being re-compiled or consumed, the drawing of figure 2 is correct. However, with the second interpretation of the first-compiled common language file being re-compiled or consumed, the drawing of figure 2 is incomplete. At runtime, the second-compiled common language file would be loaded into the execution environment, the first-compiled common language file would be required and loaded into the execution environment memory, and the second-compiled common language file would commence operation and reference the first-compiled common language file data members and methods/functions. If the second interpretation of the above listed claims is correct, then the applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Claim Rejections - 35 USC § 102

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11.   Claims 1, 7 – 9, and 12 – 15 rejected under 35 U.S.C. 102(b) as being anticipated by Blickstein (USPN 5,577,253).

As per claim 1, Blickstein teaches/discloses a "metadata module that compiles information to produce metadata information" (Blickstein, "create[s] the internal representation of the module", col. 11, lines 15 – 17);

Blickstein also teaches/discloses a "code module that compiles information to produces [sic] executable instructions." (Blickstein, "translate the source text in file 21 to a language-independent internal representation . . . .", col. 6, lines 26 –35).

As per claim 7, Blickstein teaches/discloses a "common language instructions . . . relat[ing] to the written program functions of the native source . . . ." (Blickstein, "generates from them an intermediate language representation of the program expressed in the source code", col. 3, lines 10 – 17).

As per claim 8, as applied to claim 7 above, Blickstein teaches/discloses the "common language is a common intermediate language" (Blickstein, "constructed to represent . . . source code languages in a [sic] universal manner, so the interface between the front end and the back end is of a standard format", col. 3, lines 12 – 17).

As per claim 9, as applied to claim 7 above, Blickstein teaches/discloses the "native source language is one of: a procedural language, an object oriented language, and a functional language." (Blickstein, "A front end is tailored for each different source language, such as Cobol, Fortran, ...", col. 3, lines 8 –9).

As per claim 12, the interpretation given to this and its dependent claims is that of claim 8 – that a common language file is an intermediate file as produced by a front-end. Therefore, Blickstein teaches/discloses the multi-language front-end compiler outputting

a "metadata section" (Blickstein, "generate symbol table and the intermediate language graphs . . . .", col. 11, lines 44 – 50);

Blickstein also teaches/discloses the multi-language front-end compiler outputting an "executable instructions section" (Blickstein, "produce an assembly code listing of the compiled module", col. 12, lines 20 – 22).

As per claims 13 – 15, as applied to claim 12 above, Blickstein teaches/discloses the front-end compiler compiling "procedural", "functional", and "object-oriented" programming languages (Blickstein, col. 3, lines 8 – 9).
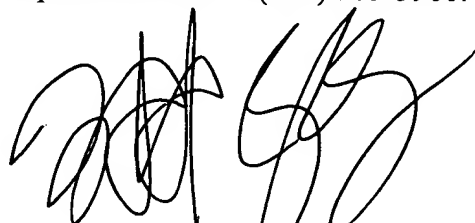
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Snyder whose telephone number is (703) 305-7205. The examiner can normally be reached on Monday - Friday from 9am - 5pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg A Morse can be reached on (703) 308-4789. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

dAs
November 8, 2002

Todd Ingberg
Art Unit 2124